

REMARKS

Amendments In the Claims and Claim Objections

Claims 7, 13, 21, 27, 36 and 37 are cancelled without prejudice or disclaimer. The claim objections are moot.

Allowed claims 14, 15, 28 and 29 are rewritten in independent form.

New claims 57-68 are added.

The Rejections Under 35 USC § 103

Claims 1-13, 16-27, 30-37 and 48-56 were rejected as allegedly unpatentable over Narita et al., US 6,537,937.

‘937 teaches glasses with percent ranges of components claimed broadly. No teaching or suggestion is present in ‘937 that would provide the necessary motivation to one of skill in the art to select the claimed components at the specified weight percentages to achieve the presently claimed glasses. All the examples in ‘937 are directed to glasses that do not fall within the claims of the present application. The selection of the specific values for each component of the composition over any other values within the ranges without any further teaching toward such selections is not adequate to render the claimed invention obvious.

“The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious.” *In re Jones*, 958 F.2d 347, 350, 21 USPQ2.d 1942 (Fed. Cir. 1992). A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *See W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) and M.P.E.P. 2141.02.

‘937 teaches, for example, that if BaO content increases, glass chips tend to form. See column 5, lines 5-10. The reference teaches that this component may be added, but states that “in case where it is desired to further reduce the specific gravity, or to suppress formation of glass chips, it is preferred to be essentially free of BaO.” See column 7, lines 20-28.

The claims of the present invention require that > 1.5 - 6 % (claim 1), and > 2.5 - 6 % (claim 2) by weight of BaO be present in the glass compositions, while simultaneously satisfying all the other specified parameters of the composition, for which no specific motivation is present in the reference.

The fact scenario of *In re Baird*, 16 F.3d 380, 29 USPQ2d 1550 (Fed. Cir. 1994), is fully applicable in the present situation. The disclosure of the reference is broad, encompassing thousands to millions of possible compositions without motivation toward the selection of any species in accord with the presently claimed invention. The Federal Circuit in *Baird* decided that a compound was not obvious over the disclosure of the prior art disclosure that taught a generic formula encompassing a vast number of compounds. In *Baird* the reference taught compounds that were "typical," "preferred," and "optimum" which were different from the claimed compound. Analogously here, the reference teaches though preferences and through examples compositions that are not within the glass space of the present invention.

"The fact a claimed product might be found within the broad field of the prior art and one might arrive at it by selecting specific items and conditions does not render the product obvious in the absence of some direction or reasons for making the selection." *See Ex parte Koon*, 132 U.S.P.Q. 359 (PBAI 1962) and *Baird*, *supra*.

The Office Action appears to pick and chose the amount of each component necessary to construct an embodiment of the claimed invention from the broad teaching of the reference while failing to provide the requisite motivation for the desirability of said combination. The specific calculations shown on page 4 of the Office Action where values are chosen for each component, while perhaps demonstrating an overlap, do not demonstrate a case of *prima facie* obviousness. No teaching or motivation in the reference is present to the selection of the specific numbers chosen by the Examiner, for example.

In the context of "written disclosure" issues, courts have analogized a disclosure to a forest where one needs description to direct one to the claimed subject matter by looking to "blaze marks" on specific trees that mark a trail through a forest. *See In re Ruschig*, 379 F.2d 990, 994-95, 154 USPQ 118 (CCPA 1967). Without such specific direction, a general disclosure is not sufficient to support narrowly claimed subject matter. *See Fujikawa v. Wattanasin*, 93 F.3d at 1571, 39 USPQ2d 1895 (CAFC 1996). Analogously, if a reference fails to provide "blaze marks," i.e., written description, to the claimed invention, it follows that such reference does not provide the description, i.e., the motivation, to one of skill in the art to the invention. The reference as discussed above has a very broad disclosure, i.e., a large forest, but fails to guide one of skill in the art to the claimed invention, lacks "blaze marks" to the claimed invention. If anything, the reference guides one away from the compositions of

the present claims by directing the attention of one of skill in the art to the exemplified compositions none of which is in accord with the present invention.

Additionally, the art of glasses is highly experimental where the properties of the glasses obtained is influenced by each of the components selected and also by the amount of each of said components in the compositions in a variety of ways. See discussion in '937, for example, on columns 5-8. This is not an art where the final product and its properties can be characterized by merely looking at the composition. It readily follows that not all the combinations of the components are obvious by merely being encompassed in a disclosure of ranges for each component. Thus, the claimed invention is not *prima facie* obvious for this additional reason as well.

Applicants request the reconsideration of the rejection.

Claims 6, 20 and 53-56 were rejected as allegedly unpatentable over Narita et al., US 6,468,933.

Narita teaches glasses with percent ranges of components claimed broadly. All the examples in Narita are directed to glasses that do not fall within the claims of the present application as admitted by the Office Action.

The allegation that overlapping ranges have been held to establish *prima facie* obviousness alone is inadequate to establish a case of *prima facie* obviousness for the reasons discussed above with regard to the '937 reference. No teaching, suggestion or guidance is present in Narita that would provide the necessary motivation to one of skill in the art to select these components at the specified weight percentages to achieve the presently claimed glasses having the desired properties.

The disclosure of the reference is very broad encompassing millions of possible compositions. Without guidance one of ordinary skill in the art would not be motivated to prepare a composition in accord with the claimed invention. Thus, none of the claims are obvious.

New claims 57-62, each dependent on one of the rejected claims over '933, are not obvious over the reference for the additional reason that they require the presence of either As_2O_3 or Sb_2O_3 , or do not contain SnO_2 or Cl^- . Narita explicitly teaches away from the use of As_2O_3 as a component in his glasses and requires instead the use of SnO_2 and chloride. Narita states on column 1, lines 55-57, that the invention's "object can be achieved by using, as a fining agent, a combination of SnO_2 and chloride instead of As_2O_3 ." Narita on column 3,

lines 46-48, also teaches away from the use of Sb_2O_3 by stating that it is “preferable not to add Sb_2O_3 ... because it is toxic.”

Claims 6, 20, 46, 47, 50 and 52-56 were rejected as allegedly unpatentable over Watzke et al., DE 196 01 922 A1.

The rejections over Watzke are very similar to the ones over Narita. The Examiner points to the overlapping ranges and alleges that overlapping ranges have been held to establish *prima facie* obviousness. However, as discussed above, the mere presence of overlapping ranges alone is insufficient to establish a *prima facie* case of obviousness. The reference must teach and/or suggest the claimed invention.

Watzke teaches glasses with percent ranges of components claimed broadly. All the examples in Watzke are directed to glasses that do not fall within the claims of the present application. Watzke exemplifies only MgO , CaO and SrO contents in his glasses, which are not even within the claimed ranges. No teaching or suggestion is present in Watzke that would provide the necessary motivation to one of skill in the art to select the components at the specified weight percentages to achieve the presently claimed glasses having the desired properties. Thus, none of the claims are obvious.

New claims 63-68, each dependent on one of the rejected claims over ‘933, are not obvious over the reference for the additional reason that they do not contain SnO_2 or ZrO_2 . Watzke requires the presence of both SnO and ZrO_2 in the glasses. See page 1, lines 10-12. On page 10, lines 5-10 and 16-17, and page 11, lines 3-5, the reference discusses the advantages obtainable by the “simultaneous introduction of a defined quantity of SnO and ZrO_2 .”

Claims 6, 20, 46, 47, 50 and 52 were rejected as allegedly unpatentable over Lautenschläger et al., US 6,465,381.

In the rejections over Lautenschläger, the Examiner once again merely points to the overlapping ranges and alleges that overlapping ranges have been held to establish *prima facie* obviousness. However, as discussed above, the mere presence of overlapping ranges alone is insufficient to establish a *prima facie* case of obviousness. The reference must teach and/or suggest the claimed invention.

Lautenschläger also teaches glasses with percent ranges of components claimed broadly. All the examples in Lautenschläger are directed to glasses that do not fall within the

claims of the present application. No teaching or suggestion is present in Lautenschläger that would provide the necessary motivation to one of skill in the art to select the components at the specified weight percentages to achieve the presently claimed glasses. Thus, none of the claims are obvious.

New claims 63-68, each dependent on one of the rejected claims over '933, are not obvious over the reference for the additional reason that they do not contain SnO₂ or ZrO₂. Lautenschläger requires the presence of ZnO₂, SnO₂, TiO₂ and CeO₂ in the glasses. See abstract. The importance of aforementioned components are discussed on column 6, line 36 to column 7, line 9.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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